



CLEAN SPECIFICATION
APPLICATION NO. 09/954,464

PAGE 1

CROSS-REFERENCE TO RELATED APPLICATIONS

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This application is a Continuation-in-Part of United States Application Serial Number 09.058,402 entitled "Open Frame shelf Assembly" filed April 9, 1998, now United States Patent No. 6,302,282 issued October 16, 2001.

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BACKGROUND OF THE INVENTION

Shelving is widely employed in the retail merchandising of products. Where merchandise is both stacked and displayed on shelves for direct access by the customer, a number of design considerations for the display technique come to bear.

10 The shelving should be both aesthetically pleasing and exhibit an openness permitting both a desirable customer visualization of the product and an open ease of manual access to it. Such criteria usually call for a cantilevered structure extending to an aisle from upstanding mounts located at each end of a display bay. Very often, the products supported for display, collectively, are relatively heavy. For instance, 15 caulking gun refills, paints, and the like can require a shelf structural capability for retaining about 400 pounds of merchandise. Such requirements have in the past led to solid shelf structures evidencing quite robust structuring with size and bulk militating against desirable aspects of customer access and the aesthetics of customer visualization.

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BRIEF SUMMARY OF THE INVENTION

Page 3 and 4

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The open frame shelf assemblies each are formed with walls positioned at each of the four sides. These walls are configured having receptor slots into which merchandise retaining components such as U-shaped guideways and the like may be inserted. The receptor gaps are accessible from either side of the shelves. In this regard, the shelves may be mounted with the sidewalls facing downwardly or upwardly at the desire of the user. To provide for this reversible arrangement, one adjusting component, that carrying the hooks, is switched from one side of the shelf 25 to the other.

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The shelving assembly also features a sign mount which is connectable with the forward wall and which contains two couplers and a sign engaging surface. The entire mount may be rotated or tilted in correspondence with the tilt or attitude of the shelf itself. Thus, the tilting signage may be provided to accommodate low or high positioned shelves as well as shelves which have been tilted either upwardly or downwardly.

A further feature of the invention provides a display shelf system wherein a plurality of pivotally mounted sign support assemblies are employed to carry discrete product identifying visual patterns. These support assemblies are each pivotally suspended from the forward region of a next upwardly adjacent merchandise carrying shelf and each visual pattern identifies the product which is represented by the visual pattern covering it. With the arrangement, more product carrying shelves advantageously may be employed and the compilation of the displays creates a highly pleasing visual collage effect. The angular orientation of the support assembly is adjustable by the retailer to provide an optimized visualization of the display surfaces with respect to the eye station of the shopper confronting or passing the display system.

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Other objects of the invention will, in part, be obvious and will, in part, appear hereinafter.

20 The invention, accordingly, comprises the system, method and apparatus possessing the construction, combination of elements, arrangement of parts and steps which are exemplified in the following detailed description.

DETAILED DESCRIPTION OF THE INVENTION

25 Page 8

Sidewalls 90 and 92 are structured substantially identically, a right and left reverse sense being the only difference between them. Accordingly, the discourse turns to the examination of sidewall 92. Sidewall 92 and sidewall 90 are configured to support the base region 82 and associated forward wall 86 and rearward wall 88 in cantilever fashion from upright supports as at 20 and 21. Note that the sidewall 90 incorporates an array of side load transfer rods, certain of which are identified at 100. Rods 100 are arranged in spaced-apart mutually parallel adjacency, and are fixed by welding to the outside pair of rod beams 98. Load transfer rods 100 are bent upwardly in the sense of Fig. 2 to form sidewall extensions, certain of which are

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represented at 102, which are arranged normally or perpendicularly to the open frame base or surface 82. Welded to the sidewall extensions 102 are a plurality of sidewall forming rods, the uppermost ones of which are seen in Fig. 2 at 104 and 105. Rods 104 and 105 as well as all of the sidewall forming rods may be observed 5 to be parallel to the beam rods 98. Looking additionally to Fig. 3, the outside of sidewall 90 is shown to incorporate two additional sidewall forming rods 106 and 107. Rods 104 and 107 are formed as a parallelogramic loop having a forward loop 10 end 111. These rods extend to adjacency with the inwardly-disposed adjusting component 112 of a bracket assembly represented generally at 114. The outer 10 adjusting component of the bracket assembly 114 is shown

Page 17

any retail display of them involving a quite substantial number of choices which must be visually presented to the prospective customer. Visualization of these distinctive 15 patterns is limited inasmuch as, by necessity, the borders are sold as relatively compact or small rolls which very often are packaged with clear plastic and hung upon rods extending from a vertical wall. The patterns are difficult to discern and the shopper eye station is one which generally will see the bottom layers as well as the upper layers with some amount of perceptual difficulty. With the shelving approach 20 of the invention, direct visual contact is evoked with angulated product identifying visual patterns permitting a direct line visual access from the customer eye station confronting the display. With this approach, the product itself is not seen by the customer but its distinctive identifying visual pattern is observed as it extends over a collection of the product. With the shelving of the invention, substantial amounts of 25 the product may be stored in bins immediately accessible by the customer behind hinged pattern carrying sign assemblages, the patterns of which are dedicated to each product within each bin. In addition to presenting a striking collage of patterns, the shelving system and methodology of retailing achieves a product density within a given wall space essentially double that of conventional vertical wall hung systems.

30 Referring to Fig. 16, such a shelving system and display methodology is represented in general at system 360. System 360 is shown to be assembled in association with two vertical supports 362 and 363 which, for the instant embodiment, are components of a shelf support structure represented generally at 364 earlier described as a "gondola". The version illustrated is in the form of an

inverted "T" having floor supported base members 366 and 367 supporting the supports or standards 362 and 363. The latter standards or supports are spaced apart a distance which may be termed a "bay width". Standards 362 and 363 are configured having sequences of slightly long and vertically disposed slots, certain of
5 which are shown respectively at 368 and 369. Of course, the system 360 may be mounted upon wall mounted standards. Support structure 364 structurally retains a plurality of open frame shelves 370-378, shelf 370 being the uppermost in the shelf array and shelf 378 being the lowermost positioned in adjacency with the base member 366. At the outset, it may be observed that a substantial number of shelves
10 are present with a much shorter mutual spacing. The shelves are constructed in the general manner discussed hereinabove. In this regard, the open frame shelves are each configured with a support surface (not shown) for supporting merchandise items. That support surface extends from a shelf forward region including a forward wall as shown in general respectively at 380-388. Each shelf has a shelf length
15 corresponding with the bay width which extends between

Page 18

shelf sides 390a, 390b-398a, 398b. Each shelf 370-378 extends between a forward wall at respective forward regions 380-388 to a shelf rearward region shown
20 respectively at 400-408. The shelves, as before, are supported in an angularly selected orientation by virtue of their coupling with paired bracket assemblies as described above in connection with figs. 3, 4, 7-8, and 14-15. Those brackets, supporting shelf sides 390a-398a, are shown respectively at 410a-418a.